

IN THE CLAIMS:

Please cancel Claims 4, 9, 22, and 27 without prejudice to or disclaimer of the subject matter presented therein. Please amend Claims 1 to 3, 5, 11, 19 to 21, 23, 29, and 36 to 39 as shown below.

1. (Currently Amended) An image processing apparatus comprising:

first extracting means for extracting a first image characteristic amount and a second image characteristic amount from an image, the second image characteristic amount being larger than the first image characteristic amount;

~~second extracting means for extracting a second image characteristic amount from the image, the second image characteristic amount differing in quantity from the first image characteristic amount;~~

judging means for judging a similarity between the first image characteristic amount ~~extracted by said first extracting means~~ and the second image characteristic amount extracted by said ~~second~~ extracting means; and

selecting means for selecting either the first image characteristic amount or the second image characteristic amount as a characteristic amount of the image in accordance with a judging result of said judging means.

2. (Currently Amended) An image processing apparatus according to claim 1, wherein, if said judging means judges that the first image characteristic amounts amount and the second image characteristic amount are similar to each other, said selecting means

selects the first image characteristic amount ~~having a smaller data amount among the first and second image characteristic amounts~~, and, if said judging means judges that the first image characteristic ~~amounts~~ amount and the second image characteristic amount are not similar to each other, said selecting means selects the second image characteristic amount ~~having a greater data amount among the first and second image characteristic amounts~~.

3. (Currently Amended) An image processing apparatus according to claim 1, wherein the first image characteristic amount and the second image characteristic amount ~~is~~ are obtained by scaling the image and by effecting DCT processing and quantization processing on the scaled image and by extracting several coefficients among coefficients obtained by a processing result from a low frequency component side.

4. (Cancelled)

5. (Currently Amended) An image processing apparatus comprising:
DCT processing means for effecting DCT processing of an image;
quantization means for effecting quantization of data subjected to the DCT processing by said DCT processing means;
judging means for judging whether an original image is a moving image or a still image;

coefficient selecting means for selecting a number of quantization DCT coefficients to be extracted from among the quantization DCT coefficients subjected to the

quantization by said quantization means, in accordance with a ~~kind of an original image~~
judging result by said judging means; and

setting means for setting the number of quantization DCT coefficients
selected by said coefficient selecting means as an image characteristic amount.

6. (Original) An image processing apparatus according to claim 5, wherein
the image has 8 x 8 pixels and is represented by Y/Cb/Cr color space.

7. (Previously Presented) An image processing apparatus according to
claim 6, wherein the image having 8 x 8 pixels is obtained by scaling down the original
image and by converting it into Y/Cb/Cr color space data if necessary.

8. (Original) An image processing apparatus according to claim 5, further
comprising extracting means for extracting several quantization DCT coefficients from a
low frequency component side on the basis of the quantization DCT coefficients selected
by said coefficient selecting means.

9. (Cancelled)

10. (Original) An image processing apparatus according to claim 5,
wherein the quantization DCT coefficients of Y/Cb/Cr components are re-arranged by
zigzag scanning, and, when the original image is a still image, six quantization DCT

coefficients of Y/Cb/Cr components are selected, respectively, from a low frequency component side, and, when the original image is a moving image, six quantization DCT coefficients of a Y component are selected and three quantization DCT coefficients of Cb/Cr components are selected, respectively, from a low frequency component side.

11. (Currently Amended) An image processing apparatus according to claim 5, further comprising image inputting means capable of inputting both still image data and moving image data comprising:

~~image inputting means capable of inputting both still image data and moving image data; and~~

~~judging means for judging whether the image inputted in accordance with an image input mode is a still image or a frame image having the moving image data.~~

12. (Previously Presented) An image processing apparatus according to claim 11, wherein said image inputting means, capable of inputting both still image data and moving image data, is a digital video device capable of effecting still image sensing, and the number of quantization DCT coefficients to be selected is based on an image sensing mode of the digital video device.

13. (Previously Presented) An image processing apparatus according to claim 11, wherein MIME TYPE of data including the original image judges whether the original image has still image data or moving image data.

14. (Previously Presented) An image processing apparatus according to claim 11, wherein said judging means judges whether the original image has still image data or moving image data based on a file extension of a data file including the original image.

15. (Previously Presented) An image processing apparatus according to claim 5, wherein two candidates are prepared as the number of quantization DCT coefficients by said selecting means, one is selected among them, and a similarity between first image characteristic amount data associated with the smaller number of quantization DCT coefficients and second image characteristic amount data associated with the greater number of quantization DCT coefficients is judged, and one of the first image characteristic amount data and the second image characteristic amount data is selected in accordance with a comparison result between a similarity value and a predetermined threshold value.

16. (Previously Presented) An image processing apparatus according to claim 15, wherein, when the similarity between the first image characteristic amount data and the second image characteristic amount data is judged, judgement of the similarity is effected by supplementing a predetermined value as data of a coefficient portion which is not included in the first image characteristic amount data having a smaller number of coefficients but is included in the second image characteristic amount data having a greater number of coefficients to the first image characteristic amount data.

17. (Original) An image processing apparatus according to claim 16, wherein the predetermined value is 16 which is the number of quantization DCT coefficients.

18. (Original) An image processing apparatus according to claim 16, wherein the predetermined value is a value which means that the DCT coefficient is zero.

19. (Currently Amended) An image processing method comprising:
~~a first extracting step of extracting a first image characteristic amount from~~
~~an image;~~

~~a second~~ an extracting step of extracting a first image characteristic amount
and a second image characteristic amount from the an image, the second image
characteristic amount ~~differing in quantity from~~ being larger than the first image
characteristic amount;

a judging step of judging a similarity between the first image characteristic
amount ~~extracted in said first extracting step~~ and the second image characteristic amount
extracted in said ~~second~~ extracting step; and

a selecting step of selecting either the first image characteristic amount or
the second image characteristic amount as a characteristic amount of the image in
accordance with a judging result of said judging step.

20. (Currently Amended) An image processing method according to claim

19, wherein if said judging step judges that the first image characteristic ~~amounts~~ amount and the second image characteristic amount are similar to each other, said selecting step selects the first image characteristic amount ~~having a smaller data amount among the first and second image characteristic amounts~~, and, if said judging step judges that the first image characteristic ~~amounts~~ amount and the second image characteristic amount are not similar to each other, said selecting step selects the second image characteristic amount ~~having a greater data amount among the first and second image characteristic amounts~~.

21. (Currently Amended) An image processing method according to claim 19, wherein the first image characteristic amount and the second image characteristic amount ~~is~~ are obtained by scaling the image and by effecting DCT processing and quantization processing on the scaled image and by extracting several coefficients among coefficients obtained by a processing result from a low frequency component side.

22. (Cancelled)

23. (Currently Amended) An image processing method comprising:
a DCT processing step of effecting DCT processing of an image;
a quantization step of effecting quantization of data subjected to the DCT processing in said DCT processing step;
a judging step of judging whether an original image is a moving image or a still image;

a coefficient selecting step of selecting a number of quantization DCT coefficients to be extracted from among the quantization DCT coefficients subjected to the quantization in said quantization step, in accordance with a ~~kind of an original image~~ judging result by said judging step; and

a setting step of setting the number of quantization DCT coefficients selected in said coefficient selecting step as an image characteristic amount.

24. (Original) An image processing method according to claim 23, wherein the image has 8 x 8 pixels and is represented by Y/Cb/Cr color space.

25. (Previously Presented) An image processing method according to claim 24, wherein the image having 8 x 8 pixels is obtained by scaling down the original image and by converting it into Y/Cb/Cr color space data if necessary.

26. (Previously Presented) An image processing method according to claim 23, further comprising an extracting step of extracting several quantization DCT coefficients from a low frequency component side on the basis of the quantization DCT coefficients selected in said coefficient selecting step.

27. (Cancelled)

28. (Original) An image processing method according to claim 23, wherein

the quantization DCT coefficients of Y/Cb/Cr components are re-arranged by zigzag scanning, and, when the original image is a still image, six quantization DCT coefficients of Y/Cb/Cr components are selected, respectively, from a low frequency component side, and, when the original image is a moving image, six quantization DCT coefficients of a Y component are selected and three quantization DCT coefficients of Cb/Cr components are selected, respectively, from a low frequency component side.

29. (Currently Amended) An image processing method according to claim 23, further comprising an image inputting step capable of inputting both still image data and moving image data comprising:

~~an image inputting step capable of inputting both still image data and moving image data; and~~

~~a judging step of judging whether the image inputted in accordance with an image input mode is a still image or a frame image having the moving image data.~~

30. (Previously Presented) An image processing method according to claim 29, wherein MIME TYPE of data including the original image judges whether the original image has still image data or moving image data.

31. (Previously Presented) An image processing method according to claim 29, wherein said judging step includes judging whether the original image has still image data or moving image data based on a file extension of a data file including the original

image.

32. (Previously Presented) An image processing method according to claim 23, wherein two candidates are prepared as the number of quantization DCT coefficients in said selecting step, one is selected among them, and a similarity between first image characteristic amount data associated with the smaller number of quantization DCT coefficients and second image characteristic amount data associated with the greater number of quantization DCT coefficients is judged, and one of the first image characteristic amount data and the second image characteristic amount data is selected in accordance with a comparison result between a similarity value and a predetermined threshold value.

33. (Previously Presented) An image processing method according to claim 32, wherein, when the similarity between the first image characteristic amount data and the second image characteristic amount data is judged, judgement of the similarity is effected by supplementing a predetermined value as data of a coefficient portion which is not included in the first image characteristic amount data having a smaller number of coefficients but is included in the second image characteristic amount data having a greater number of coefficients to the first image characteristic amount data.

34. (Original) An image processing method according to claim 33, wherein the predetermined value is 16 which is the number of quantization DCT coefficients.

35. (Original) An image processing method according to claim 33, wherein the predetermined value is a value which means that the DCT coefficient is zero.

36. (Currently Amended) A computer-readable storing storage medium on which is stored a computer-executable program, the program comprising:

~~program code for a first extracting step of extracting a first image characteristic amount from an image;~~

program code for ~~a second~~ an extracting step of extracting a first image characteristic amount and a second image characteristic amount from the an image, the second image characteristic amount ~~differing in quantity from being larger than~~ the first image characteristic amount;

program code for a judging step of judging a similarity between the first image characteristic amount ~~extracted by said code for a first extracting step~~ and the second image characteristic amount extracted by said code for ~~a second~~ an extracting step; and

program code for a selecting step of selecting either the first image characteristic amount or the second image characteristic amount as a characteristic amount of the image in accordance with a judging result of said code for a judging step.

37. (Currently Amended) A computer-readable storage storing medium on which is stored a computer-executable program, the program comprising:

program code for a DCT processing step of effecting DCT processing of an image;

program code for a quantization step of effecting quantization of data subjected to the DCT processing by said code for a DCT processing step;

program code for a judging step of judging whether an original image is a moving image or a still image;

program code for a coefficient selecting step of selecting a number of quantization DCT coefficients to be extracted from among the quantization DCT coefficients subjected to the quantization by said code for a quantization step, in accordance with ~~a kind of an original image~~ judging result of said code for a judging step; and

program code for a setting step of setting the number of quantization DCT coefficients selected by said code for a coefficient selecting step as an image characteristic amount.

38. (Currently Amended) In a computer data signal adapted to extract an image characteristic amount and to represent a command sequence carried out by an image processing method for applying the characteristic amount to an image and incorporating the characteristic amount into a conveying wave, said image processing method comprising:

~~a first extracting step of extracting a first characteristic amount from an image;~~

~~a second~~ an extracting step of extracting a first image characteristic amount and a second image characteristic amount from the image, the second image characteristic amount ~~differing in quantity from~~ being larger than the first image characteristic amount;

a judging step of judging a similarity between the first image characteristic

amount ~~extracted by said first extracting step~~ and the second image characteristic amount extracted by said ~~second~~ extracting step; and

a selecting step of selecting either the first image characteristic amount or the second image characteristic amount as a characteristic amount of the image in accordance with a judging result of said judging step.

39. (Currently Amended) In a computer data signal adapted to extract an image characteristic amount and to represent a command sequence carried out by an image processing method for applying the characteristic amount to an image and incorporating the characteristic amount into a conveying wave, said image processing method comprising:

a DCT processing step of effecting DCT processing of an image;

a quantization step of effecting quantization of data subjected to the DCT processing by said DCT processing step;

a judging step of judging whether an original image is a moving image or a still image;

a coefficient selecting step of selecting a number of quantization DCT coefficients to be extracted from among the quantization DCT coefficients subjected to the quantization in said quantization step, in accordance with a ~~kind of an original image~~ judging result of said judging step; and

a setting step of setting the number of quantization DCT coefficients selected in said coefficient selecting step as an image characteristic amount.